EXERCISE COUNTS: MASTERING THE VALUES OF HONG KONG COINS

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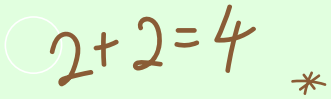
This module can be used for the teaching of the topic for the first time in P1. But it can also be used in P2 for consolidation purposes, after some selection and modifications.



RATIONALE - WHY DO NCS STUDENTS FIND COIN VALUES DIFFICULT TO UNDERSTAND?

There are three main challenges to P1 non-Chinese speaking students while learning about coins circulated in Hong Kong, particularly in Chinese medium-of-instruction classes.

1. They have rarely any chances to use real money in their daily activities, which are still confined to their homes, given their non-Chinese speaking background.
2. Usually without experiencing any kindergarten education in Hong Kong, they have just learnt the following knowledge and skills, only for a few months:
    - knowing about the names of numbers in Chinese, in the correct order,
    - counting objects in Chinese, a second language, accurately, and
    - understanding the connection between digits and the values they represent.

It may help if teachers are aware that non-Chinese speaking students are not just applying these knowledge and skills to the understanding of money, but also the other way round, i.e. applying the latter to further mastering the former.

3. There are two specific difficulties to overcome, concerning coins:
    - the total value of a stack of coins may not be the same as the number of coins in the stack,
    - for some Hong Kong coins, e.g. the 10-cent coin, the number minted on it is 10, but students in Chinese medium-of-instruction classes have to learn to name it as '1 角', which are often mistakenly called '10 角'. Likewise, the 20-cent and 50-cent coins as '20 角' and '50 角' respectively.

To work around the three challenges above, the following targets and strategies are considered.

LEARNING TARGETS

Non-Chinese speaking students are expected to be able to

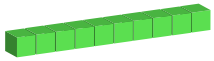
1. **identify coins of**
   (i) 1元, 2元, 5元 and 10元 [元 = dollar(s)] &
   (ii) 1角, 2角, and 5角 [角 is a Chinese unit equivalent to 10 cents],
   by their images, Chinese names and values,
2. **do skip counting in terms of**
   (i) '元' &
   (ii) '角', and
3. **practice equal-value (or fair) exchange**
   (i) among 1元, 2元, 5元 and 10元 coins, and then
   (ii) among 1角, 2角, 5角 and 1元.

Targets 2 and 3 are set to relate the knowledge and skills learnt in the earlier strand of Number with daily life usage. Through such a way, those knowledge and skills are expected to be consolidated and further developed.

LEARNING AND TEACHING STRATEGIES

1. **Use of manipulatives** – to start students off with tokens (or 'pre-money coins'① , 代幣) or counters② (e.g. 十進制 – 積木數粒, 數棒, 數塊). They are used to
   - illustrate the values and units of coins, and
   - connect their values and units more vividly to their names.

   Here are two examples. Full tables for reference can be found in Section Teaching notes, exercises and materials)

Tokens	Counters	Image of Coins	Names & Values
			1角
			1元

2. **Practice of skip counting with real coins –** let students move from tokens to real coins by practising their learnt counting skills in 2s, 5s or 10s.
3. **To engage and motivate students with story problems –** let students practise fair exchange with the skills of counting, grouping and problem solving.

① Name and idea adapted from the article, 'Money Problems?', by Marion Bond, published February 2011. https://nrich.maths.org/2586

② The use of counters is adapted from the video, 'Learning Money for Children in 1st and 2nd Grade', published December 2014. https://www.youtube.com/watch?v=Z7hwaeaDk-I&app=desktop

SELF-ASSESSMENT IN 'EXERCISE COUNTS'

The learning targets and strategies mentioned above are embedded in exercises, to be suggested in Lesson Plans I, II and III below. In order to enrich the formative nature of these exercises, self-assessment will be introduced at the end, equipping students with the skills of self-reflection, self-directed improvement and self-monitored progress. In such a way, students will be able to approach a higher level of autonomous learning.